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(FILE 'HOME' ENTERED AT 08:15:57 ON 01 JUN 2007)

FILE 'CAPLUS, MEDLINE' ENTERED AT 08:16:13 ON 01 JUN 2007

L1	1 S MODIFIED GUM ARABIC (P) EMULSION?
L2	2 S MODIFIED GUM ARABIC (P) EMULSIFIER?
L3	11 S MODIFIED GUM ARABIC
L4	5 S MODIFIED GUM ARABIC (P) EMULSIF?

L1 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:892824 CAPLUS
 DOCUMENT NUMBER: 139:349989
 TITLE: Method for modification of gum arabic for enhanced emulsification capability.
 INVENTOR(S): Hayashi, Hideo
 PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
 SOURCE: PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093324	A1	20031113	WO 2002-JP8144	20020808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2483987	A1	20031113	CA 2002-2483987	20020808
AU 2002323925	A1	20031117	AU 2002-323925	20020808
EP 1505078	A1	20050209	EP 2002-755886	20020808
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005158440	A1	20050721	US 2003-510952	20020808
PRIORITY APPLN. INFO.:			JP 2002-130212	A 20020501
			JP 2002-156166	A 20020529
			WO 2002-JP8144	W 20020808

AB A method for improving the emulsifying capability of gum arabic comprises heating the crude pulverized gum arabic at 40-100° under 30-100% relative humidity. The modified gum arabic thus obtained does not form chunks, stick to the container, dry, or scorch or burn. This modified gum arabic is suitable for use as an emulsifying agent for drinks, confectionery, chewing gum, oil-based perfumes, oil-based pigments, oil-soluble vitamins, etc.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:192380 CAPLUS
 DOCUMENT NUMBER: 114:192380
 TITLE: Stability of arabinogalactan of larch in powders and aqueous solutions
 AUTHOR(S): Kawasuji, Toru; Ueda, Masako
 CORPORATE SOURCE: Toyama Prefect. Inst. Pharm. Res., Toyama, 939-03, Japan
 SOURCE: Toyama-ken Yakuji Kenkyusho Nenpo (1990), Volume Date 1989, (17), 78-82
 CODEN: TYKNEU; ISSN: 1340-8011
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 AB The storage stability of arabinogalactan, obtained by extraction and purification of

sawdusts from Soviet larch, in the form of powder and aqueous solution, was investigated. No changes were observed with the arabinogalactan powder after storage at 50° for 3 mo and thus was stable to heat. By comparison gum arabic powder was heat labile, resulting in yellow-brown coloration and generation of an unpleasant smell. Under conditions of 40° and 75% relative humidity, the arabinogalactan powder as well as gum arabic powder became a yellow-brown elastic mass. A 10% aqueous solution of the arabinogalactan gave coloration, deposits, and a foul smell like gum arabic. When compared on storage at lower temps., the aqueous arabinogalactan solution was assumed to be somewhat more stable than the aqueous gum arabic solution. Arabinogalactan powder is more stable than gum arabic in the dry state, although the powder is slightly unstable under heating and humid conditions. Also, some sterilization procedures for the labile aqueous arabinogalactan solution were necessary to avoid contamination by various bacteria species and thus for stabilization.

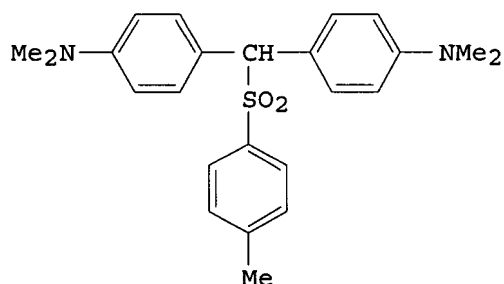
L1 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:10053 CAPLUS
DOCUMENT NUMBER: 94:10053
TITLE: Microcapsules
INVENTOR(S): Iwasaki, Hiroshi; Irii, Shinsuke; Kondo, Mitsuru
PATENT ASSIGNEE(S): Kanzaki Paper Mfg. Co., Ltd., Japan
SOURCE: Ger. Offen., 30 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3005023	A1	19800828	DE 1980-3005023	19800211
DE 3005023	C2	19890202		
JP 55108465	A	19800820	JP 1979-16535	19790214
JP 61027418	B	19860625		
JP 55121833	A	19800919	JP 1979-29654	19790312
JP 60022970	B	19850605		
JP 56057847	A	19810520	JP 1979-134369	19791017
JP 61027420	B	19860625		
GB 2044208	A	19801015	GB 1980-2730	19800128
GB 2044208	B	19830323		
US 4349454	A	19820914	US 1980-115915	19800128
AU 8055005	A	19800821	AU 1980-55005	19800129
AU 536177	B2	19840419		
BE 881688	A1	19800530	BE 1980-58404	19800213
FR 2448933	A1	19800912	FR 1980-3135	19800213
FR 2448933	B1	19820416		

PRIORITY APPLN. INFO.: JP 1979-16535 A 19790214
JP 1979-29654 A 19790312
JP 1979-134369 A 19791017

OTHER SOURCE(S): MARPAT 94:10053
GI



AB A diarylmethane leuco dye is formed at 10-80° from a hydrophobic <20% organic solvent solution of a tertiary diaryldiamine and 1-1.5 mol of a sulfinic acid as aqueous solution of pH 2-5.5, containing 0.5-5% of an anionic protective colloid, such as gum arabic or Na alginate. In the diamine 2 1,4-phenylene or 1,4-naphthylene residues are linked through a COH, CNH, or CSH group. The leuco dye solution is then microencapsulated in a conventional manner without isolation or purification. Thus, I was synthesized by adding a solution of 4,4'-bis(dimethylamino)benzhydrol 2.7 g in di-Bu phthalate 200 g to a mixture of a 10% aqueous solution of an ethylene-maleic anhydride copolymer 100, Na p-toluenesulfinate 3.6, and H2O 200 g of pH 3. After homogenization to 4 μ droplets, urea 10 and resorcinol 1 g were dissolved in the system and 37% aqueous HCHO 25 g added, followed by 2 h stirring at 55°. For coating on 40 g/m² paper at 4 g/m² cellulose powder 30 and 2% aqueous hydroxyethyl cellulose solution 250 parts were added to the milky white dispersion. The d. of copies obtained with acid clay-coated paper was highly resistant to light (95% after 5 days in ambient light), heat (94% after 8 h at 100°), and humidity (99% after 24 h at 50° and 90% relative humidity).

L1 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1969:482608 CAPLUS
 DOCUMENT NUMBER: 71:82608
 TITLE: Treatment of polyester fibers
 PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd.
 SOURCE: Fr., 5 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1559915	A	19690314	FR 1968-1559915	19680307
US 3644081	A	19720222	US 1968-708506	19680227
GB 1213858	A	19701125	GB 1968-1213858	19680306
NL 6803234	A	19680909	NL 1968-3234	19680307
			JP 1967-13892	A 19670307

PRIORITY APPLN. INFO.:

AB Poly(ethylene terephthalate) (I) fibers with improved hand were prepared by impregnating the fibers with an alkaline aqueous solution of polymer followed by thermal treatment. Thus, a I fabric was degreased, dried, soaked in 1 l. of a solution of 430 g. NaOH and 80 g. gum arabic, passed through a rolling cylinder, heated for 70 sec. at 180°, washed for 1 min. with running water, 2 min. with 5% aqueous AcOH, and 2 min. with running water, dried 30 min. at 110°, and held for 24 hrs. in an atmospheric of 65% relative humidity to give a fabric with very satisfactory hand. Other polymers used were gum tragacanth, Bassorah gum, Kipro gum, Nafaka crystalline-gum, dextrin, starch, poly(vinyl alc.), carboxymethyl cellulose, Me cellulose, and other cellulose ethers.

L3 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:390779 CAPLUS
DOCUMENT NUMBER: 141:71031
TITLE: Cadmium colors: composition and properties
AUTHOR(S): Paulus, J.; Knuutinen, U.
CORPORATE SOURCE: Conservation Department, EVTEK Institute of Art and Design, Vantaa, 01300, Finland
SOURCE: Applied Physics A: Materials Science & Processing (2004), 79(2), 397-400
CODEN: APAMFC; ISSN: 0947-8396
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The composition and the properties of cadmium aquarelle colors are discussed. The examined colors were 24 different aquarelle cadmium colors from six different manufacturers. The colors ranged from light, bright yellows to dark, deep-red tones. The aim of this research was to find out if the pigments contain cadmium salts: sulfides and/or selenides. This information will help in choosing watercolors in conservation processes. Today, aquarelle colors not containing cadmium pigments are being sold as cadmium colors; thus their properties might be different from actual cadmium colors. The aim of the research was to verify that the color samples contained cadmium pigments and to estimate their compns. and ageing properties. Element analyses were performed from color samples using micro-chemical tests and x-ray fluorescence measurements. Thin-layer chromatog. was used for analyzing gum Arabic as a possible binding medium in the chosen color samples. Through ageing tests, the resistance of the color samples to the exposure to light, heat and humidity was studied. Visible-light spectroscopy was used in determining the hues and hue changes of the aquarelle color samples. The spectrophotometer used the CIE L*a*b* tone color measuring system. From the color measurements the changes in the lightness/darkness, the redness, the yellowness and the saturation of the samples were examined

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:243122 CAPLUS
DOCUMENT NUMBER: 112:243122
TITLE: Desensitizing method for electrophotographic lithographic plates
INVENTOR(S): Osawa, Sadao; Toyama, Tadao
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 02022095	A	19900124	JP 1988-170776	19880711
PRIORITY APPLN. INFO.:			JP 1988-170776	19880711

AB Electrophotog. obtained lithog. plates composed of conducting substrate, photoconductor layer, and toner image layer, are treated with protecting desensitizer containing water-soluble carboxyalkylated starch (degree of carboxyalkylation 0.03-0.5). These protecting liqs. efficiently remove scums, desensitizes, and protects. Thus, a photoconducting plate, having an Al substrate and a photosensitive layer containing a hydrazone, a thiopyrillium compound, and a thermoplastic binder, was charged and imaged with a liquid developer to form a toner image,

and fixed by heating. Its non-image part was etched with a solution containing K silicate, KOH, and EtOH. A desensitizer, containing carboxymethylated amylopectin (deg. of carboxymethylation 0.2) 100, 35% Na isopropyl naphthalenesulfonate 5, Na dehydroacetate 0.3 parts and H₃PO₄ to make pH 3.5, was applied on the plate, stood at 35° , 80% humidity for 3 days, used for 1000 printing, and was covered with ink by stopping wetting and paper feeding. On resumed printing, clean copies were obtained after small number of losses, similarly as when gum arabic was used.

L3 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:564268 CAPLUS
DOCUMENT NUMBER: 111:164268
TITLE: Protective gum for planographic printing plates
INVENTOR(S): Hu, Guoliang; Zuo, Tianhan
PATENT ASSIGNEE(S): Loude Regional Standardization Assoc., Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 87102068	A	19880330	CN 1987-102068	19870811
PRIORITY APPLN. INFO.:			CN 1987-102068	19870811

AB A protective gum for coating planog. printing plates is comprised of cellulose derivs. as film-forming agents and a phosphate or quaternary ammonium salt as a surfactant. The gum has good film-forming and hydrophilic properties and stable viscosity and its dried film is readily redissolved in water. The gum is prepared by dissolving methylcellulose in water to form a 1-8% solution, adding an acid to adjust the pH to 5.5, adding the surfactant at 0.2-0.5%, and aging for 24 h. The gum is chemical stable and replaces the conventional gum arabic solution which undergoes deterioration under heat and humidity.

L3 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:505873 CAPLUS
DOCUMENT NUMBER: 111:105873
TITLE: Carbonless copying paper with improved humidity-and heat-resistance
INVENTOR(S): Sud, Arun; Paul, Sankar K.
PATENT ASSIGNEE(S): Business Forms Ltd., India
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4822770	A	19890418	US 1987-63100	19870617
IN 166848	A1	19900728	IN 1987-CA418	19870525
GB 2225595	A	19900606	GB 1988-27949	19881130
GB 2225595	B	19921111		
IN 170607	A1	19920418	IN 1989-CA818	19891003
IN 170608	A1	19920418	IN 1989-CA819	19891003
IN 170609	A1	19920418	IN 1989-CA820	19891003
PRIORITY APPLN. INFO.:			IN 1987-CA418	A 19870525
			US 1987-63100	A 19870617

AB A pressure-sensitive carbonless copying paper is described comprising a

sheet coated on 1 side with an electron-donating chromogenic color former and another sheet coated on 1 side with a color developer, where the color formed is dispersed in a cluster-free microcapsule form in a hydrophilic colloidal solution containing a H2O-soluble graft copolymer having a backbone of CM-cellulose or gum arabic and side chains (5-10 weight%) of polyacrylic acid or polymethacrylic acid. The heat- and moisture-resistance of the copy paper is substantially improved.

L3 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:200910 CAPLUS
DOCUMENT NUMBER: 100:200910
TITLE: Microcapsule toner for electrophotography
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58182644	A	19831025	JP 1982-64673	19820420
PRIORITY APPLN. INFO.:			JP 1982-64673	19820420

AB The microcapsule toner is prepared by heat-treatment of double-walled microcapsules containing a printing material and a binder. The walls are prepared by doubly covering the core with a polyurethane (or polyurea) resin layer and a polyamide resin layer, and then spray-drying the dispersion containing the microcapsules. The temperature of the heat treatment may be 50-300°. The method improves the powder characteristics of the microcapsules and avoids lump formation by the toner which results in loss of image resolution and sharpness. The toner also has improved fixing and antioffset characteristics, and is durable. Thus, microcapsules were prepared by addition of a mixture containing castor oil 46, carbon black 4, EtOAc 25, tolylene diisocyanate-hexanetriol addition product (Desmodux L from Bayer A.G.) 25 and terephthaloyl chloride 2 weight parts into 10% gum arabic 200 weight parts to obtain a dispersion. Hexamethylenediamine (10%) 10 weight parts and then a Na2CO3 solution were added and the mixture was heated at 70° with stirring for 2 h. The microcapsules were separated, washed, and spray-dried to obtain microcapsules having an outer wall of polyamide resin (from terephthalic chloride and hexamethylenediamine) and inner wall of polyurea resin (from tolylene diisocyanate-hexanetriol addition product and hexamethylenediamine) and containing castor oil and carbon black. Capsules were dried at 100° for 24 h to obtain a fluid powder. Addition of hydrophobic silica (Aerosil-R-972) from Nippon Aerosil) further improved the flow. The toner thus obtained showed excellent performance and high stability to high temperature and humidity.

L3 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:180328 CAPLUS
DOCUMENT NUMBER: 88:180328
TITLE: Hologram
INVENTOR(S): Yokono, Koujiro; Nishide, Katsuhiko
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Ger. Offen., 26 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2733664	A1	19780202	DE 1977-2733664	19770726
DE 2733664	C2	19870730		
JP 53015154	A	19780210	JP 1976-89489	19760727
US 4254193	A	19810303	US 1979-64535	19790807
PRIORITY APPLN. INFO.:			JP 1976-89489	A 19760727
			US 1977-819594	A1 19770727

AB Polysaccharides, such as cellulose, starch, alginic acid, gum arabic, or their derivs., sensitized with 0.1-10% of a Cr6+ salt, form phase holograms of superior diffraction efficiency and stability to those from Cr-sensitized gelatin. The advantages are ascribed to CO as the metal-saccharide coordinative bond, derived from OH and COOH groups. The laser beam interference images are developed in H2O to wash out the Cr salt and to swell the layer, which is then shrunk by iso-PrOH. Thus, a 4 μ coating (dry) was deposited on glass from a mixture of 35% aqueous gum arabic 40 and 5% aqueous (NH4)2Cr2O7 2 mL, which was dried 2-3 h at room temperature and then heated 1 h at 150° in an oven. The plate was immersed 2 min in the dark in 5% aqueous (NH4)2Cr2O7, dried at room temperature, exposed to a laser beam with an offset angle of 70°, washed 5 min with H2O of 50°, and immersed 2 min in iso-PrOH of 50°. The diffraction of efficiency of the hot air-dried plate at 6328 Å and 50 mJ/cm2 was 84% and remained unchanged during an exposure to 80% humidity for 30 min and during 1 h irradiation with a Hg lamp.

L3 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1976:406693 CAPLUS
 DOCUMENT NUMBER: 85:6693
 TITLE: Fibrous batts impregnated with aqueous dispersions based on heat-hardenable phenolic resins
 INVENTOR(S): Harding, James
 PATENT ASSIGNEE(S): Union Carbide Corp., USA
 SOURCE: U.S., 10 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3944703	A	19760316	US 1975-551237	19750220
FR 2146448	A1	19730302	FR 1972-26264	19720720
PRIORITY APPLN. INFO.:			US 1971-164819	A2 19710721
			US 1974-239316	A3 19740329
			US 1974-466790	A2 19740503

AB Aqueous dispersions of heat-hardenable resole phenolic resins which were stable >2 weeks at room temperature, infinitely dilutable with water, and had low volatile content and pollution index were prepared from formulations containing gum arabic (I) [9000-01-5] and guar gum (II) [9000-30-0] or gum carrageenan [9000-07-1]. The aqueous dispersions were used as spray binders for bats of mineral fibers. A mixture of PhOH 1200, 40% aqueous HCHO 1668, Ba(OH)2.H2O 30, and H2O 60g was heated to 75° and allowed to reach and continue at atmospheric reflux for 45 min. A solution of I 24, II 6, and H2O 720 g was added followed by 12 g 96% H2SO4 in 48 g H2O. The mixture was heated 10 min at 85° and cooled to give a 42% solids resin-in-water dispersion at pH 5.7, with gel time 75 sec, average particle diameter 13 μ , and pollution index (volatiles content) 2.9%. The dispersion showed no visible settling after 2 weeks at 23° and was infinitely dilutable with water with no change in particle size. In a glass adhesion test 34.38 g of the dispersion was mixed with (NH4)2SO4 0.2, urea 3.6, silane 0.54, and water 6.82 g and was used to bond glass beads. Adhesive bond strength was 700 psi after 1 hr

in a desiccator, and 600 psi after 16 hr in a humidity chamber.

L3 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1973:165015 CAPLUS

DOCUMENT NUMBER: 78:165015

TITLE: Measurements of the activity of aqueous solutions. V

AUTHOR(S): Duclaux, Jacques; Cohn, Charlotte

CORPORATE SOURCE: Inst. Biol. Phys.-Chem., Paris, Fr.

SOURCE: Journal de Chimie Physique et de Physico-Chimie

Biologique (1973), 70(3), 430-2

CODEN: JCPBAN; ISSN: 0021-7689

DOCUMENT TYPE: Journal

LANGUAGE: French

AB In the method (D. and C., 1971-2) for determining the activity of aqueous solns. by

comparing the weight losses of H₂O evaporated through calibrated closed poly(vinyl chloride) tubes filled with solution and pure H₂O and suspended in air, the H₂O permeability of the plastic is affected by variation in temperature

and humidity. If the tubes are suspended beside each other, the accuracy of measuring the activity is not affected. The plastic was essentially impermeable to salts (e.g. CaCl₂) in concentrated solns., and to organic acids (e.g. HCO₂H, AcOH) at 2M; it was slightly permeable to air. The activities measured for N NaCl, a very concentrated viscous solution of semicollodial Cr perchlorate, and saturated solns. AgO₂CCF₃, Fe(ClO₄)₃, LiCl, and Mg(O₂CCF₃)₂ are 0.965-0.966, 0.081, 0.816, 0.133, 0.096, and 0.583, resp. The activities were the same for aqueous solns. of sucrose and the condensation products obtained by heating sucrose at progressively higher temps. at 126-182°. The activities of powdered gum arabic dried in air at 70° and of bentonite samples dried in air at 100° were 0.098 and 0.113-0.148, resp. A stilbite sample dried in air at 100 or 200° had a lower activity than anhydrous Mg(ClO₄)₂.

L3 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1946:20489 CAPLUS

DOCUMENT NUMBER: 40:20489

ORIGINAL REFERENCE NO.: 40:3990b-e

TITLE: Semiconducting composition and tape produced therefrom

INVENTOR(S): Barker, Harry H.; Hill, Lawrence R.; Berberich, Leo J.

PATENT ASSIGNEE(S): Westinghouse Electric Corp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	US 2399314		19460430	US 1942-467729	19421203
AB	The formation of corona in elec. apparatus limits the permissible voltage since corona tends to destroy organic insulation on high-voltage members exposed to air or other gaseous medium. B., et al. have developed a coating that may be painted or taped on conductors that eliminates corona. Gum arabic, about 75 parts to 10 parts, is compound with about 25 parts of water. This mixture is added to colloidal coal. Sufficient water is added to dissolve the resin and suspend the coal. About 1% NH ₄ OH is added to stabilize the gum. Tests have indicated that the mixture will have a viscosity of 10 to 100 seconds Number 1 Demmler cup. This mixture can be coated on the elec. wire. Also, the colloidal coal, resin, water mixture can be coated on a cloth and the dry cloth used to tape the electrical wire or condenser. After the elec. assembly has been treated with the coal it may be dipped, sprayed, or brushed with a heavy coating of weather-resistant paint or enamel. The paint or enamel reduces the effect of changes in atmospheric humidity on the water soluble resins. It is				

reported that for conductors having voltages of the order of 6600 or greater, the semiconducting coal type compns. should have a surface resistivity of the order of from 1 to 1000 megohms to avoid excessive heating and to prevent corona. The invention is shown in figure form.

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:892824 CAPLUS

DOCUMENT NUMBER: 139:349989

TITLE: Method for modification of gum arabic for enhanced emulsification capability.

INVENTOR(S): Hayashi, Hideo

PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093324	A1	20031113	WO 2002-JP8144	20020808
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2483987	A1	20031113	CA 2002-2483987	20020808
AU 2002323925	A1	20031117	AU 2002-323925	20020808
EP 1505078	A1	20050209	EP 2002-755886	20020808
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005158440	A1	20050721	US 2003-510952	20020808
PRIORITY APPLN. INFO.:			JP 2002-130212	A 20020501
			JP 2002-156166	A 20020529
			WO 2002-JP8144	W 20020808

AB A method for improving the emulsifying capability of gum arabic comprises heating the crude pulverized gum arabic at 40-100° under 30-100% relative humidity. The modified gum arabic thus obtained does not form chunks, stick to the container, dry, or scorch or burn. This modified gum arabic is suitable for use as an emulsifying agent for drinks, confectionery, chewing gum, oil-based perfumes, oil-based pigments, oil-soluble vitamins, etc.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 1 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1085204 CAPLUS
DOCUMENT NUMBER: 145:487668
TITLE: Method for extracting antibody with high activity from egg yolk
INVENTOR(S): Yang, Yanjun; Xu, Rongrong
PATENT ASSIGNEE(S): Southern Yangtze University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1844144	A	20061011	CN 2006-10040414	20060508
PRIORITY APPLN. INFO.:			CN 2006-10040414	20060508

AB The method comprises preparing fresh eggs from common hens or egg layers immunized with pathogens (bacteria or virus), sterilizing, separating egg yolk, diluting yolk with water at a ratio of 1:6-20, stirring for 25 min, centrifuging at 3000-8000 rpm or precipitating at 0-12° for 4-16 h to obtain supernatant crude extractive, adding food-level natural high-mol. gum 0.01-2.8% and calcium salt 0.01-3.5%, stirring for 5-30 min, standing for 10-40 min, centrifuging at 2000-5000 rpm or frame filter pressing with diatomite of 0.1-1.5%, separating supernatant with ultrafilter membrane with cut-off of 50000-150000 at 4-12°, filtration sterilizing obtained filter liquor with ceramic or modified polysulfone membrane, freeze drying at -40-(-30)° for 120 min, gradually heating to 30° and drying to obtain yolk antibodies with high bioactivity and purity of 30-50%, wherein ultrafilter membrane is poly(vinylidene fluoride), modified polysulfone or poly(ether sulfone). Food-level high mol. gum is gum arabic, carrageenan, sodium alginate or xanthan; calcium salt is calcium acetate, calcium chloride or calcium lactate. With the method, egg white obtained can be prepared into albumen powder by spray drying and residual yolk deposit can be prepared into yolk powder by spray drying. The method has properties of advanced technol., high source availability and high automation.

L6 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1291102 CAPLUS
DOCUMENT NUMBER: 144:127764
TITLE: The use of gum arabic and modified starch in the microencapsulation of a food flavoring agent
AUTHOR(S): Krishnan, Savitha; Kshirsagar, Amol C.; Singhal, Rekha S.
CORPORATE SOURCE: Food and Fermentation Technology Department, Institute of Chemical Technology, University of Mumbai, Mumbai, 400 019, India
SOURCE: Carbohydrate Polymers (2005), 62(4), 309-315
CODEN: CAPOD8; ISSN: 0144-8617
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Solvent extracted oleoresins exhibit a flavor profile, close to the freshly ground spice in a wide spectrum of foods. In spite of their many advantages over ground spices, their sensitivity to light, heat, and O₂ is a disadvantage. One approach to overcome this disadvantage is by means of microencapsulation. The present work reports on microencapsulation of cardamom oleoresin by spray drying using gum arabic, maltodextrin, and a com. available modified starch as wall materials. The microcapsules were evaluated for the content and stability of volatiles, non-volatiles, entrapped 1,8-cineole

and entrapped α -terpinyl acetate for 6 wk. Gum arabic offered greater protection to the oleoresin than maltodextrin and modified starch, as seen from the t1/2, time required for a constituent to reduce to 50% of its initial value.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:589815 CAPLUS

DOCUMENT NUMBER: 143:192607

TITLE: Microencapsulation of black pepper oleoresin

AUTHOR(S): Shaikh, Javed; Bhosale, Rajesh; Singhal, Rekha

CORPORATE SOURCE: Food and Fermentation Technology Department, Institute of Chemical Technology, University of Mumbai, Mumbai, 400 019, India

SOURCE: Food Chemistry (2005), Volume Date 2006, 94(1), 105-110

CODEN: FOCHDJ; ISSN: 0308-8146

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Despite of solvent extracted spice oleoresin having many advantages over ground spices, its sensitivity to light, heat and oxygen is a disadvantage. One approach to overcome this is microencapsulation. The present work reports on microencapsulation of black pepper oleoresin by spray-drying, using gum arabic and modified starch as wall materials. The microcapsules were evaluated for the content and stability of volatiles, non-volatiles, total piperine and entrapped piperine for 6 wk. Gum arabic offered greater protection to the pepper oleoresin than modified starch, as seen from the t1/2, time required for a constituent to be reduced to 50% of its initial value.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:510597 CAPLUS

DOCUMENT NUMBER: 143:96144

TITLE: Microencapsulation of cardamom oleoresin: Evaluation of blends of gum arabic, maltodextrin and a modified starch as wall materials

AUTHOR(S): Krishnan, Savitha; Bhosale, Rajesh; Singhal, Rekha S.

CORPORATE SOURCE: Food and Fermentation Technology Department, Institute of Chemical Technology, University of Mumbai, Matunga, Mumbai, 400 019, India

SOURCE: Carbohydrate Polymers (2005), 61(1), 95-102

CODEN: CAPOD8; ISSN: 0144-8617

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Although the spice oleoresins provide complete flavor profile than their resp. essential oils, their sensitivity to the light, heat and oxygen is a disadvantage. This can be overcome by effective encapsulation. The present work reports on the microencapsulation of cardamom oleoresin by spray drying using binary and ternary blends of gum arabic, maltodextrin, and modified starch as wall materials. The microcapsules were evaluated for the content and stability of volatiles, entrapped 1,8-cineole and entrapped α -terpinyl acetate for 6 wk. A 4/6,1/6,1/6 blend of gum arabic:maltodextrin:modified starch offered a protection, better than gum arabic as seen from the t1/2, time required for a constituent to reduce to 50% of its initial value.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:260105 CAPLUS
 DOCUMENT NUMBER: 142:299738
 TITLE: Process for producing modified gum arabic with excellent emulsifying power and freedom from caking or discoloring
 INVENTOR(S): Sasaki, Yasushi; Ogasawara, Takeshi; Katayama, Tsuyoshi; Sakata, Makoto
 PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
 SOURCE: PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005026213	A1	20050324	WO 2004-JP13092	20040902
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2538298	A1	20050324	CA 2004-2538298	20040902
EP 1666502	A1	20060607	EP 2004-772906	20040902
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1849340	A	20061018	CN 2004-80025974	20040902
US 2007031566	A1	20070208	US 2006-571266	20060309
PRIORITY APPLN. INFO.:			JP 2003-318958	A 20030910
			WO 2004-JP13092	W 20040902

AB The method comprises heating raw gum arabic under dry conditions, preferably under the conditions of a drying loss of 3% or less. The modified gum arabic is useful as emulsifying agent for food, drug, etc.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:878419 CAPLUS
 DOCUMENT NUMBER: 141:349200
 TITLE: Modification of gum arabic by heating
 INVENTOR(S): Al-Assaf, Saphwan; Phillips, Glyn Owen; Sasaki, Yasushi; Katayama, Tsuyoshi
 PATENT ASSIGNEE(S): Phillips Hydrocolloids Research Limited, UK; San-Ei Gen F.F.I. Inc.
 SOURCE: PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004089992	A1	20041021	WO 2004-JP5146	20040409
WO 2004089992	A8	20050120		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2521692	A1	20041021	CA 2004-2521692	20040409
EP 1612225	A1	20060104	EP 2004-726810	20040409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1771263	A	20060510	CN 2004-80009530	20040409
US 2006240166	A1	20061026	US 2005-552480	20051006
PRIORITY APPLN. INFO.:			JP 2003-105903	A 20030409
			WO 2004-JP5146	W 20040409

AB The gum arabic obtained from Acacia senegal or A. seyal is heated at 110° for ≥24h to get the modified gum arabic with higher total dietary fiber (determined by the AOAC method) of ≥90% and with an average mol.-weight of ≥1,000,000. The modified gum arabic has higher viscosity and is useful for manufacturing food additives and supplements, and pharmaceuticals.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:878418 CAPLUS
 DOCUMENT NUMBER: 141:351679
 TITLE: Modified gum arabic and its manufacture
 INVENTOR(S): Al-Assaf, Saphwan; Phillips, Glyn Owen; Sasaki, Yasushi; Katayama, Tsuyoshi
 PATENT ASSIGNEE(S): Phillips Hydrocolloids Research Limited, UK; San-Ei Gen F.F.I. Inc.
 SOURCE: PCT Int. Appl., 73 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2004089991	A1	20041021	WO 2004-JP5050	20040407
WO 2004089991	A8	20041229		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004228558	A1	20041021	AU 2004-228558	20040407
CA 2519969	A1	20041021	CA 2004-2519969	20040407
US 2005124805	A1	20050609	US 2003-498988	20040407

EP 1611159 A1 20060104 EP 2004-726280 20040407
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
 CN 1768080 A 20060503 CN 2004-80008935 20040407
 JP 2006522202 T 20060928 JP 2006-507712 20040407
 PRIORITY APPLN. INFO.: JP 2003-103495 A 20030407
 WO 2004-JP5050 W 20040407

AB The present invention provides a water-soluble modified gum arabic with a weight-average mol. weight not less than 0.9 million and arabinogalactan protein (AGP) not less than 17% obtained by heating Acacia senegal gum arabic and modified water-soluble gum arabic with a weight-average mol. weight not less than 2.5 million and with protein containing high mol. weight components of not less than 25%. Moreover, the present invention provides modified gum arabic with standardized and predictable mol. properties and methods for providing the modified gum arabic endowed with high emulsification efficiency and stability and for uniforming natural variations in unmodified gum arabic. The present invention changes the natural protein distribution of gum arabic, and increases AGP content. The modified gum arabic is useful as emulsifier, thickener, encapsulation agent, binder or coating for food, cosmetics, pharmaceuticals, etc.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:456161 CAPLUS

DOCUMENT NUMBER: 135:194684

TITLE: Studies of flavor encapsulation by agents produced from modified sago and tapioca starches

AUTHOR(S): Varavinit, Saiyavit; Chaokasem, Narisa; Shobsngob, Sujin

CORPORATE SOURCE: Department of Biotechnology, Faculty of Science, Mahidol University, Bangkok, 10400, Thailand

SOURCE: Starch/Staerke (2001), 53(6), 281-287

CODEN: STARDD; ISSN: 0038-9056

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The efficiency of sago and tapioca starch stearates for encapsulating lemon oil were studied and compared to the efficiency of gum arabic. The stearates were prepared by esterification of stearic acid with starch. To accomplish esterification, the stearic acid was first coated on the surface of the starch granules. Then the coated granules were heated at 150°C for 2 h to obtain sago or tapioca starch stearate (SSS or TSS). SSS or TSS can be prepared as ready-to-use products in the form of pregelatinized-hydrolyzed sago or tapioca starch stearate (PGHSSS or PGHTSS). The resulting modified starches were used for encapsulation of lemon oil. The lemon oil encapsulating efficiency for SSS with DS 0.009 and 0.014 were close to that of gum arabic, whereas the encapsulating efficiency for PGHSSS with DS 0.0052 and 0.016 were higher than that of the gum arabic. The TSS and PGHTSS provided encapsulating efficiencies lower than the gum arabic.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:403849 CAPLUS

DOCUMENT NUMBER: 115:3849

TITLE: Modification of trypsin with arabic gum

AUTHOR(S): Lu, Sifang; Yang, Yunhuan

CORPORATE SOURCE: Dep. Biochem., China Med. Univ., Shenyang, Peop. Rep.
China
SOURCE: Zhongguo Yike Daxue Xuebao (1990), 19(4), 257-60
CODEN: ZYDXEN; ISSN: 0258-4646
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Trypsin was modified with gum arabic using a
method described by J. Kohn and M. Wilechek (1982). The activity of
modified trypsin was 62% of that of natural trypsin. Heat
stability and pepsin resistance of modified trypsin was better
than that of natural trypsin.

ACCESSION NUMBER: 1963:11107 CAPLUS
 DOCUMENT NUMBER: 58:11107
 ORIGINAL REFERENCE NO.: 58:1862a-b
 TITLE: Pulverized, fat-soluble, food dyes, particularly
 carotene and carotenoids
 INVENTOR(S): Pazola, Zdzislaw; Wenta, Jadwiga; Swierczynski, Antoni
 PATENT ASSIGNEE(S): Poznanskie Zaklady Koncentratow Spozywczych
 SOURCE: 2 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PL 43304		19601007	PL	19591006

AB The starting material is an aqueous solution comprising a filler, an emulsion stabilizer, and antioxidants for the aqueous phase. A hot, very concentrated solution of a dye containing an antioxidant for the fatty phase is added to the solution; it is heated to above 60°, and the whole mixture homogenized twice or thrice. The resultant emulsion is spray-dried, preferably after aeration with an inert gas, as CO₂, by very vigorous stirring. The emulsion stabilizers may be gelatin, agar-agar, gum arabic, Na alginate, or pectins. The filler may be potato sirup, lactose, glucose, or sucrose. The emulsifiers may be mono- or diglycerides or lecithin. The antioxidants for the aqueous phase may be ascorbic acid, H₂SO₃, or sulfites, and those for the fatty phase may be esters of gallic acid, tocopherols, or nordihydroguaiaretic acid. Thus, potato sirup 50, gelatin 30, Na₂SO₃ 0.3, and an emulsifier from soybean oil 0.1 parts were dissolved in H₂O 50 parts. To the solution 30 parts of an oil solution of the dye, containing 0.1% of Et gallate was added, the mixture homogenized twice or thrice, and finally spray dried.

ACCESSION NUMBER: 1924:2046 CAPLUS
DOCUMENT NUMBER: 18:2046
ORIGINAL REFERENCE NO.: 18:314b-d
TITLE: Fire-extinguishing
INVENTOR(S): Eckelmann, L. E.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
GB 201379		19230802	GB 1922-18889	19220710

AB An emulsion formed of a plurality of polychlorinated hydrocarbons of different sp. gr. is added to one of the reagents employed in the generation of fire-extinguishing foam, so that the latter is capable of supplying an air-excluding blanket of non-inflammable vapor over the fire, even if itself destroyed by the heat. CCl₄ may be employed together with one or more lighter chlorinated hydrocarbons and an emulsifier, such as saponin, soap, gum arabic, etc., and 1-3% of light oils may be added to increase the permanency and fluidity of the emulsion. The emulsion is mixed with a foam-producing reagent (such as a solution of Al₂(SO₄)₃, to be afterwards mixed with NaHCO₃ solution), so concentrated as to have a sp. gr. approx. equal to that of the emulsion.

L17 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1968:409746 CAPLUS
DOCUMENT NUMBER: 69:9746
TITLE: Solubilization and stabilization of hop extracts, and products containing the extracts
INVENTOR(S): Bavisotto, Vincent S.; Hansen, Gavin L.
PATENT ASSIGNEE(S): Pfizer, Chas., and Co., Inc.
SOURCE: Fr., 7 pp.
CODEN: FRXXAK
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1492470		19670818	FR	
DE 1517779			DE	
PRIORITY APPLN. INFO.:			US	19650929

AB The process gives stable hop extract emulsions, easily dispersed in cold water, cold wort, and cold beer, and can be used to impart aroma and flavor to beers and ales. The emulsion can be prepared with preisomerized or nonisomerized hop exts. The emulsions remain stable for several months when stored at 25, 32, and 37°, and can stand repeated cycles of freezing and thawing. Emulsions containing 1-42% hop extract by weight can be obtained. Preferred emulsifiers are dioctyl sulfosuccinate and Na lauryl sulfate. Usually 0.04-2.0% of emulsifier is enough. Higher concns. tend to lower foam formation and may adversely influence beer flavor. An emulsion of hop extract containing about 42.5% by weight of preisomerized hop extract is prepared, thus:
add 19.28 kg. hop extract heated to 70° slowly to a rapidly agitated mixture of 6.8 kg. 70% aqueous sorbitol, 19 kg. 60% aqueous gum arabic, and 0.68 kg. polyoxyethylene sorbitan monooleate. Use a laboratory homogenizer at 120 kg./sq. cm. at about 70°. The process permits hopping fermented beer, without the loss of isohumulones by adsorption on yeast and coagulated proteins.

L17 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1957:19642 CAPLUS
DOCUMENT NUMBER: 51:19642
ORIGINAL REFERENCE NO.: 51:4000f-i
TITLE: Nitrocellulose propellants
INVENTOR(S): Holmes, Raymond S.; Baldridge, Byron C.; O'Neill, John J., Jr.; Silk, Charles E.
PATENT ASSIGNEE(S): Olin Mathieson Chemical Corp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2771351		19561120	US 1956-583900	19560510
DE 1050257			DE	

AB A propellant with improved ballistic and barrel-erosion properties for 0.30 and larger caliber cartridges is described. The grains have a sp. gr. of ≤ 1.5 , a surface area of 10-84 sq. cm./g., and a web thickness of 0.015-0.070 in. The propellant contains 3-15% of a deterrent with a heat of explosion of -200 to -2500 cal./g. localized near the surface of the grains. Thus, nitrocellulose containing about 13.2% N was made into 0.025-0.034 in. grains by the process described in the preceding abstract. About 100 parts of these grains was suspended in 330 parts water.

ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:260105 CAPLUS
DOCUMENT NUMBER: 142:299738
TITLE: Process for producing modified gum arabic with excellent emulsifying power and freedom from caking or discoloring
INVENTOR(S): Sasaki, Yasushi; Ogasawara, Takeshi; Katayama, Tsuyoshi; Sakata, Makoto
PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005026213	A1	20050324	WO 2004-JP13092	20040902
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2538298	A1	20050324	CA 2004-2538298	20040902
EP 1666502	A1	20060607	EP 2004-772906	20040902
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1849340	A	20061018	CN 2004-80025974	20040902
US 2007031566	A1	20070208	US 2006-571266	20060309
PRIORITY APPLN. INFO.: JP 2003-318958 A 20030910 WO 2004-JP13092 W 20040902				

AB The method comprises heating raw gum arabic under dry conditions, preferably under the conditions of a drying loss of 3% or less. The modified gum arabic is useful as emulsifying agent for food, drug, etc.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:878419 CAPLUS
DOCUMENT NUMBER: 141:349200
TITLE: Modification of gum arabic by heating
INVENTOR(S): Al-Assaf, Saphwan; Phillips, Glyn Owen; Sasaki, Yasushi; Katayama, Tsuyoshi
PATENT ASSIGNEE(S): Phillips Hydrocolloids Research Limited, UK; San-Ei Gen F.F.I. Inc.
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089992	A1	20041021	WO 2004-JP5146	20040409
WO 2004089992	A8	20050120		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG

CA 2521692 A1 20041021 CA 2004-2521692 20040409

EP 1612225 A1 20060104 EP 2004-726810 20040409

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

CN 1771263 A 20060510 CN 2004-80009530 20040409

US 2006240166 A1 20061026 US 2005-552480 20051006

PRIORITY APPLN. INFO.: JP 2003-105903 A 20030409

WO 2004-JP5146 W 20040409

AB The gum arabic obtained from Acacia senegal or A. seyal is heated at
 110° for ≥24h to get the modified gum
 arabic with higher total dietary fiber (determined by the AOAC method)
 of ≥90% and with an average mol.-weight of ≥1,000,000. The
 modified gum arabic has higher viscosity and
 is useful for manufacturing food additives and supplements, and
 pharmaceuticals.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:878418 CAPLUS

DOCUMENT NUMBER: 141:351679

TITLE: Modified gum arabic and
 its manufacture

INVENTOR(S): Al-Assaf, Saphwan; Phillips, Glyn Owen; Sasaki,
 Yasushi; Katayama, Tsuyoshi

PATENT ASSIGNEE(S): Phillips Hydrocolloids Research Limited, UK; San-Ei
 Gen F.F.I. Inc.

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089991	A1	20041021	WO 2004-JP5050	20040407
WO 2004089991	A8	20041229		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004228558	A1	20041021	AU 2004-228558	20040407
CA 2519969	A1	20041021	CA 2004-2519969	20040407
US 2005124805	A1	20050609	US 2003-498988	20040407
EP 1611159	A1	20060104	EP 2004-726280	20040407

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
 CN 1768080 A 20060503 CN 2004-80008935 20040407
 JP 2006522202 T 20060928 JP 2006-507712 20040407
 PRIORITY APPLN. INFO.: JP 2003-103495 A 20030407
 WO 2004-JP5050 W 20040407

AB The present invention provides a water-soluble modified gum
 arabic with a weight-average mol. weight not less than 0.9 million and
 arabinogalactan protein (AGP) not less than 17% obtained by heating Acacia
 senegal gum arabic and modified water-soluble gum arabic with a weight-average
 mol.

weight not less than 2.5 million and with protein containing high mol. weight
 components of not less than 25%. Moreover, the present invention provides
 modified gum arabic with standardized and
 predictable mol. properties and methods for providing the modified
 gum arabic endowed with high emulsification efficiency
 and stability and for uniforming natural variations in unmodified gum
 arabic. The present invention changes the natural protein distribution of
 gum arabic, and increases AGP content. The modified gum
 arabic is useful as emulsifier, thickener, encapsulation agent,
 binder or coating for food, cosmetics, pharmaceuticals, etc.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:892824 CAPLUS

DOCUMENT NUMBER: 139:349989

TITLE: Method for modification of gum arabic for enhanced
 emulsification capability.

INVENTOR(S): Hayashi, Hideo

PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093324	A1	20031113	WO 2002-JP8144	20020808
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2483987	A1	20031113	CA 2002-2483987	20020808
AU 2002323925	A1	20031117	AU 2002-323925	20020808
EP 1505078	A1	20050209	EP 2002-755886	20020808
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
US 2005158440	A1	20050721	US 2003-510952	20020808
PRIORITY APPLN. INFO.:			JP 2002-130212	A 20020501
			JP 2002-156166	A 20020529
			WO 2002-JP8144	W 20020808

AB A method for improving the emulsifying capability of gum arabic comprises
 heating the crude pulverized gum arabic at 40-100° under 30-100%
 relative humidity. The modified gum arabic
 thus obtained does not form chunks, stick to the container, dry, or scorch

or burn. This modified gum arabic is suitable for use as an emulsifying agent for drinks, confectionery, chewing gum, oil-based perfumes, oil-based pigments, oil-soluble vitamins, etc.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:793627 CAPLUS

TITLE: Modified gum arabic and guar gum systems as emulsifying and stabilizing agents.

AUTHOR(S): Ward, Florian M.

CORPORATE SOURCE: TIC Gums, Inc, Belcamp, MD, 21017, USA

SOURCE: Abstracts of Papers, 220th ACS National Meeting, Washington, DC, United States, August 20-24, 2000 (2000) CARB-080
CODEN: 69FZC3

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal; Meeting Abstract

LANGUAGE: English

AB A new hydrocolloid system consisting of gum arabic (a galactoarabinan from Acacia species.) and guar gum (a galactomannan from Cyamopsis tetragonolobus) that exhibits enhanced emulsifying properties, was formulated by using an octenyl succinylation process. Various combinations of gum arabic and hydrolyzed guar gum were prepared and solns. of about 20-30 brix were subjected to treatment with octenylsuccinic acid. The gum arabic/guar gum systems were subjected to a spraydrying process using a laboratory spraydrier model (Niro Atomizer, Copenhagen, Denmark. Oil-in water emulsions were prepared using various oil to gum ratios. The stability of the emulsions was evaluated by determining the particle size distribution using a Coulter Counter Analyzer and by conducting other accelerated shelf-life studies. The usage level of gum arabic can be reduced by enhancing its emulsifying properties by octenylsuccinylation and by co-processing it with guar gum, which will contribute to the viscosity and stability of the emulsion. Other applications of this system include the following: source of high soluble dietary fiber; thickener and suspending agent.

L3 ANSWER 11 OF 11 MEDLINE on STN

ACCESSION NUMBER: 2006449953 IN-PROCESS

DOCUMENT NUMBER: PubMed ID: 16740270

TITLE: Removal of methylene blue dye from an aqueous media using superabsorbent hydrogel supported on modified polysaccharide.

AUTHOR: Paulino Alexandre T; Guilherme Marcos R; Reis Adriano V; Campese Gilsinei M; Muniz Edvani C; Nozaki Jorge

CORPORATE SOURCE: Chemistry Department, Maringa State University, Av. Colombo 5790, CEP 87020-900, Maringa, Parana, Brazil.

SOURCE: Journal of colloid and interface science, (2006 Sep 1) Vol. 301, No. 1, pp. 55-62. Electronic Publication: 2006-06-05. Journal code: 0043125. ISSN: 0021-9797.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals

ENTRY DATE: Entered STN: 29 Jul 2006

Last Updated on STN: 12 Dec 2006

AB The removal of methylene blue (MB) in water with the superabsorbent hydrogel (SH) formed by modified gum arabic, polyacrylate, and polyacrylamide was investigated. The SH exhibited excellent performance in MB absorption. The maximum absorption capacity was 48 mg of the dye per g of SH, representing 98% of the MB removed.

Experimental parameters were used as follows: pH 8, hydrogel mass 50 mg, and initial concentration of MB 50 mg L⁻¹. In a procedure with an individual solution of orange II, an opposite effect related to the MB was observed: the hydrogel only absorbed water, resulting in an orange II-rich solution. The orange II concentration in solution increased about 50 times (relative to the initial concentration). In another experiment using an aqueous mixture of orange II and MB, the SH absorbed the MB exclusively. Compared to the MB, the orange II is separated from water by SH selectivity-absorption through an inverse process. This effect was attributed to the formation of a ionic complex between the imine groups of MB and the ionized carboxylic groups of SH.

L3 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:726749 CAPLUS
DOCUMENT NUMBER: 145:341189
TITLE: Removal of methylene blue dye from an aqueous media using superabsorbent hydrogel supported on modified polysaccharide
AUTHOR(S): Paulino, Alexandre T.; Guilherme, Marcos R.; Reis, Adriano V.; Campese, Gilsinei M.; Muniz, Edvani C.; Nozaki, Jorge
CORPORATE SOURCE: Chemistry Department, Maringa State University, Parana, CEP 87020-900, Brazil
SOURCE: Journal of Colloid and Interface Science (2006), 301(1), 55-62
CODEN: JCISA5; ISSN: 0021-9797
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Methylene blue (MB) removal from water with the superabsorbent hydrogel (SH) formed by modified gum arabic, polyacrylate, and polyacrylamide was studied. The SH exhibited excellent performance in MB absorption. Maximum absorption capacity was 48 mg MB/g SH, representing 98% of MB removed. Exptl. parameters were pH 8, 50 mg HS mass, and initial 50 mg/L MB concentration. In a procedure with an individual solution of orange II, an opposite effect to that of MB was observed: the SH only absorbed water, resulting in a more rich orange II solution. The orange II concentration in solution increased approx. 50 times relative to the initial concentration. In another experiment using an aqueous mixture of orange II and MB, the SH absorbed the MB exclusively. Compared to MB, orange II was separated from water by SH selectivity-absorption via an inverse process. This effect was attributed to formation of a ionic complex between the imine groups of MB and the ionized carboxylic groups of SH.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:381300 CAPLUS
DOCUMENT NUMBER: 144:419840
TITLE: Method for producing modified gum arabic for emulsifiers
INVENTOR(S): Katayama, Tsuyoshi
PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006043553	A1	20060427	WO 2005-JP19123	20051018
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,			

KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

JP 2004-304812

A 20041019

AB Gum arabic is irradiated with ionizing radiation to improve emulsifying properties. Thus, gum arabic was irradiated with 10 kGy electron beam and mixed (17%) with 30% β -carotene 5, a medium-chain triglyceride 10, and water 68%.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1075831 CAPLUS

DOCUMENT NUMBER: 143:366235

TITLE: Methods for modifying gum arabic and modified gum arabic obtained by the method and use thereof

INVENTOR(S): Sakata, Makoto; Katayama, Tsuyoshi; Ogasawara, Takeshi; Sasaki, Yasushi

PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005092930	A1	20051006	WO 2005-JP5373	20050324
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1734056	A1	20061220	EP 2005-721387	20050324
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1934136	A	20070321	CN 2005-80009613	20050324
PRIORITY APPLN. INFO.:			JP 2004-90603	A 20040325
			WO 2005-JP5373	W 20050324

AB Gum arabic (I) having good emulsifying power and no discoloration and offensive odor is prepared by dissolving in water to concentration $\leq 50\%$ and kept ≥ 6 h at $< 60^\circ$. Thus, a suspension containing β -carotene and triglycerides was emulsified with modified aqueous I.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:587297 CAPLUS

DOCUMENT NUMBER: 143:96386

TITLE: Modified gum arabic, its manufacture, and use for thickening compositions, gelling compositions, capsules, and edible films

INVENTOR(S): Akao, Kazumi

PATENT ASSIGNEE(S): INA Food Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005179417	A	20050707	JP 2003-419270	20031217
PRIORITY APPLN. INFO.:			JP 2003-419270	20031217

AB Gum arabic is dispersed in organic solvents containing acids for ion-exchange of

counter ions of acidic groups with H to give modified gum arabic, whose 5 weight% aqueous solns. show viscosity ≥ 30 mPa-s. Thickening compns. containing the modified gum arabic and other thickening agents, gelling compns. containing the modified gum arabic and other gelling agents, and capsules and edible films mainly comprising the modified gum arabic are claimed. Gum arabic was dispersed in 80 volume% EtOH, mixed with aqueous H₂SO₄, stirred for 1 h,

and partially neutralized with aqueous NaOH to pH 5.0 to modified gum arabic showing viscosity (at 25°) 320 mPa-s, while that of untreated gum arabic was 3.4 Pa-s. A food gel containing 5 weight%

of the modified gum arabic and 1 weight% agar, an edible film, a hard capsule substrate, and a watercolor containing the modified gum arabic were formulated.

L3 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:510597 CAPLUS

DOCUMENT NUMBER: 143:96144

TITLE: Microencapsulation of cardamom oleoresin: Evaluation of blends of gum arabic, maltodextrin and a modified starch as wall materials

AUTHOR(S): Krishnan, Savitha; Bhosale, Rajesh; Singhal, Rekha S.

CORPORATE SOURCE: Food and Fermentation Technology Department, Institute of Chemical Technology, University of Mumbai, Matunga, Mumbai, 400 019, India

SOURCE: Carbohydrate Polymers (2005), 61(1), 95-102

CODEN: CAPOD8; ISSN: 0144-8617

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Although the spice oleoresins provide complete flavor profile than their resp. essential oils, their sensitivity to the light, heat and oxygen is a disadvantage. This can be overcome by effective encapsulation. The present work reports on the microencapsulation of cardamom oleoresin by spray drying using binary and ternary blends of gum arabic, maltodextrin, and modified starch as wall materials. The microcapsules were evaluated for the content and stability of volatiles, entrapped 1,8-cineole and entrapped α -terpinyl acetate for 6 wk. A 4/6,1/6,1/6 blend of gum arabic:maltodextrin:modified starch offered a protection, better than gum arabic as seen from the t_{1/2}, time required for a constituent to reduce to 50% of its initial value.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:381300 CAPLUS
 DOCUMENT NUMBER: 144:419840
 TITLE: Method for producing modified gum
 arabic for emulsifiers
 INVENTOR(S): Katayama, Tsuyoshi
 PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
 SOURCE: PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006043553	A1	20060427	WO 2005-JP19123	20051018
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRIORITY APPLN. INFO.: JP 2004-304812 A 20041019
 AB Gum arabic is irradiated with ionizing radiation to improve emulsifying properties. Thus, gum arabic was irradiated with 10 kGy electron beam and mixed (17%) with 30% β -carotene 5, a medium-chain triglyceride 10, and water 68%.
 REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:260105 CAPLUS
 DOCUMENT NUMBER: 142:299738
 TITLE: Process for producing modified gum
 arabic with excellent emulsifying
 power and freedom from caking or discoloring
 INVENTOR(S): Sasaki, Yasushi; Ogasawara, Takeshi; Katayama, Tsuyoshi; Sakata, Makoto
 PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan
 SOURCE: PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005026213	A1	20050324	WO 2004-JP13092	20040902
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,			

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

CA 2538298 A1 20050324 CA 2004-2538298 20040902
EP 1666502 A1 20060607 EP 2004-772906 20040902

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

CN 1849340 A 20061018 CN 2004-80025974 20040902

US 2007031566 A1 20070208 US 2006-571266 20060309

PRIORITY APPLN. INFO.: JP 2003-318958 A 20030910

WO 2004-JP13092 W 20040902

AB The method comprises heating raw gum arabic under dry conditions,
preferably under the conditions of a drying loss of 3% or less. The
modified gum arabic is useful as
emulsifying agent for food, drug, etc.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:878418 CAPLUS

DOCUMENT NUMBER: 141:351679

TITLE: Modified gum arabic and its manufacture

INVENTOR(S): Al-Assaf, Saphwan; Phillips, Glyn Owen; Sasaki,
Yasushi; Katayama, Tsuyoshi

PATENT ASSIGNEE(S): Phillips Hydrocolloids Research Limited, UK; San-Ei
Gen F.F.I. Inc.

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089991	A1	20041021	WO 2004-JP5050	20040407
WO 2004089991	A8	20041229		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004228558	A1	20041021	AU 2004-228558	20040407
CA 2519969	A1	20041021	CA 2004-2519969	20040407
US 2005124805	A1	20050609	US 2003-498988	20040407
EP 1611159	A1	20060104	EP 2004-726280	20040407
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR			
CN 1768080	A	20060503	CN 2004-80008935	20040407
JP 2006522202	T	20060928	JP 2006-507712	20040407
PRIORITY APPLN. INFO.:			JP 2003-103495 A 20030407	
			WO 2004-JP5050 W 20040407	

AB The present invention provides a water-soluble modified gum
arabic with a weight-average mol. weight not less than 0.9 million and
arabinogalactan protein (AGP) not less than 17% obtained by heating Acacia
senegal gum arabic and modified water-soluble gum arabic with a weight-average
mol.

weight not less than 2.5 million and with protein containing high mol. weight components of not less than 25%. Moreover, the present invention provides modified gum arabic with standardized and predictable mol. properties and methods for providing the modified gum arabic endowed with high emulsification efficiency and stability and for uniforming natural variations in unmodified gum arabic. The present invention changes the natural protein distribution of gum arabic, and increases AGP content. The modified gum arabic is useful as emulsifier, thickener, encapsulation agent, binder or coating for food, cosmetics, pharmaceuticals, etc.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:892824 CAPLUS

DOCUMENT NUMBER: 139:349989

TITLE: Method for modification of gum arabic for enhanced emulsification capability.

INVENTOR(S): Hayashi, Hideo

PATENT ASSIGNEE(S): San-Ei Gen F.F.I., Inc., Japan

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093324	A1	20031113	WO 2002-JP8144	20020808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2483987	A1	20031113	CA 2002-2483987	20020808
AU 2002323925	A1	20031117	AU 2002-323925	20020808
EP 1505078	A1	20050209	EP 2002-755886	20020808
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005158440	A1	20050721	US 2003-510952	20020808
PRIORITY APPLN. INFO.:			JP 2002-130212	A 20020501
			JP 2002-156166	A 20020529
			WO 2002-JP8144	W 20020808

AB A method for improving the emulsifying capability of gum arabic comprises heating the crude pulverized gum arabic at 40-100° under 30-100% relative humidity. The modified gum arabic thus obtained does not form chunks, stick to the container, dry, or scorch or burn. This modified gum arabic is suitable for use as an emulsifying agent for drinks, confectionery, chewing gum, oil-based perfumes, oil-based pigments, oil-soluble vitamins, etc.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:793627 CAPLUS

TITLE: Modified gum arabic and

guar gum systems as emulsifying and stabilizing agents.

AUTHOR(S): Ward, Florian M.
CORPORATE SOURCE: TIC Gums, Inc, Belcamp, MD, 21017, USA
SOURCE: Abstracts of Papers, 220th ACS National Meeting, Washington, DC, United States, August 20-24, 2000 (2000) CARB-080
CODEN: 69FZC3
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; Meeting Abstract
LANGUAGE: English

AB A new hydrocolloid system consisting of gum arabic(a galactoarabinan from Acacia species.) and guar gum (a galactomannan from Cyamopsis tetragonolobus) that exhibits enhanced emulsifying properties, was formulated by using an octenyl succinylation process. Various combinations of gum arabic and hydrolyzed guar gum were prepared and solns. of about 20-30 brix were subjected to treatment with octenylsuccinic acid. The gum arabic/guar gum systems were subjected to a spraydrying process using a laboratory spraydrier model (Niro Atomizer, Copenhagen, Denmark. Oil-in water emulsions were prepared using various oil to gum ratios. The stability of the emulsions was evaluated by determining the particle size distribution using a Coulter Counter Analyzer and by conducting other accelerated shelf-life studies. The usage level of gum arabic can be reduced by enhancing its emulsifying properties by octenylsuccinylation and by co-processing it with guar gum, which will contribute to the viscosity and stability of the emulsion. Other applications of this system include the following: source of high soluble dietary fiber; thickener and suspending agent.